Virginia Grade Level Alternative Worksheet

Grade 5 Science

Student's Name: _____ State Testing Identifier: _____

Check all that apply:

_____ **Assigned scores have been entered into the online VGLA System.**

_____ **Assigned scores have been verified and submitted for final scoring in the online VGLA System**

An "X" under No Evidence represents a Total of 0.

Reporting Category	SOL #	Specific Virginia Standard of Learning	Demonstrated (0 to 4)	Inferred (0 to 4)	No Evidence (0)	Total (0 to 4)
RC 1	**4.1**	The student will plan and conduct investigations in which a) distinctions are made among observations, conclusions, inferences, and predictions; b) hypotheses are formulated based on cause-and-effect relationships; c) variables that must be held constant in an experimental situation are defined; d) appropriate instruments are selected to measure linear distance, volume, mass, and temperature; e) appropriate metric measures are used to collect, record, and report data; f) data are displayed using bar and basic line graphs; g) numerical data that are contradictory or unusual in experimental results are recognized; and h) predictions are made based on data from picture graphs, bar graphs, and basic line graphs.				
RC 1	**5.1**	The student will plan and conduct investigations in which a) rocks, minerals, and organisms are identified using a classification key; b) estimations of length, mass, and volume are made; c) appropriate instruments are selected and used for making quantitative observations of length, mass, volume, and elapsed time; d) accurate measurements are made using basic tools (thermometer, meter stick, balance, graduated cylinder); e) data are collected, recorded, and reported using the appropriate graphical representation (graphs, charts, diagrams); f) predictions are made using patterns, and simple graphical data are extrapolated; g) manipulated and responding variables are identified; and h) an understanding of the nature of science is developed and reinforced.				
RC 2	**4.2**	The student will investigate and understand characteristics and interaction of moving objects. Key concepts include a) motion is described by an object's direction and speed; b) forces cause changes in motion; c) friction is a force that opposes motion; and d) moving objects have kinetic energy.				
RC 2	**4.3**	The student will investigate and understand the characteristics of electricity. Key concepts include a) conductors and insulators; b) basic circuits (open/closed, parallel/series); c) static electricity; d) the ability of electrical energy to be transformed into heat, light, and mechanical energy; e) simple electromagnets and magnetism; and f) historical contributions in understanding electricity.				
RC 2	**5.2**	The student will investigate and understand how sound is transmitted and is used as a means of communication. Key concepts include a) frequency, waves, wavelength, vibration; b) the ability of different media (solids, liquids, and gases) to transmit sound; and c) uses and applications (voice, sonar, animal sounds, and musical instruments).				

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RC 2	**5.3**	The student will investigate and understand basic characteristics of visible light and how it behaves. Key concepts include a) the visible spectrum and light waves; b) refraction of light through water and prisms; c) reflection of light from reflective surfaces (mirrors); d) opaque, transparent, and translucent; and e) historical contributions in understanding light.				
RC 2	**5.4**	The student will investigate and understand that matter is anything that has mass, takes up space, and occurs as a solid, liquid, or gas. Key concepts include a) atoms, elements, molecules, and compounds; b) mixtures including solutions; and c) the effect of heat on the states of matter.				
RC 3	**4.4**	The student will investigate and understand basic plant anatomy and life processes. Key concepts include a) the structures of typical plants (leaves, stems, roots, and flowers); b) processes and structures involved with reproduction (pollination, stamen, pistil, sepal, embryo, spore, and seed); c) photosynthesis (sunlight, chlorophyll, water, carbon dioxide, oxygen, and sugar); and d) dormancy				
RC 3	**4.5**	The student will investigate and understand how plants and animals in an ecosystem interact with one another and the nonliving environment. Key concepts include a) behavioral and structural adaptations; b) organization of communities; c) flow of energy through food webs; d) habitats and niches; e) life cycles and f) influence of human activity on ecosystems.				
RC 3	**4.8**	The student will investigate and understand important Virginia natural resources. Key concepts include b) animals and plants;				
RC 3	**5.5**	The student will investigate and understand that organisms are made of cells and have distinguishing characteristics. Key concepts include a) basic cell structures and functions; b) kingdoms of living things; c) vascular and nonvascular plants; and d) vertebrates and invertebrates.				

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RC 4	**4.6**	The student will investigate and understand how weather conditions and phenomena occur and can be predicted. Key concepts include a) weather measurements and meteorological tools (air pressure – barometer, wind speed – anemometer, rainfall – rain gauge, and temperature – thermometer); and b) weather phenomena (fronts, clouds, and storms).				
RC 4	**4.7**	The student will investigate and understand the relationships among the Earth, moon, and sun. Key concepts include a) the motions of the Earth, moon, and sun (revolution and rotation); b) the causes for the Earth's seasons and phases of the moon; c) the relative size, position, age, and makeup of the Earth, moon, and sun; and d) historical contributions in understanding the Earth-moon-sun system				
RC 4	**4.8**	The student will investigate and understand important Virginia natural resources. Key concepts include a) watershed and water resources; c) minerals, rocks, ores, and energy sources; and d) forest, soil, and land.				
RC 4	**5.6**	The student will investigate and understand characteristics of the ocean environment. Key concepts include a) geological characteristics (continental shelf, slope, rise); b) physical characteristics (depth, salinity, major currents); and c) biological characteristics (ecosystems).				
RC 4	**5.7**	The student will investigate and understand how the Earth's surface is constantly changing. Key concepts include a) the rock cycle including identification of rock types; b) Earth history and fossil evidence; c) the basic structure of the Earth's interior; d) plate tectonics (earthquakes and volcanoes); e) weathering and erosion; and f) human impact.				

Reporting Category Key

RC 1 Scientific Investigation
RC 2 Force, Motion, Energy, and Matter
RC 3 Life Processes and Living Systems
RC 4 Earth/Space Systems and Cycle